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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/528,372

03/18/2005

Tsuyoshi Asai

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20457

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04/11/2008

ANTONELLI, TERRY, STOUT & KRAUS, LLP  
1300 NORTH SEVENTEENTH STREET  
SUITE 1800  
ARLINGTON, VA 22209-3873

EXAMINER

WYSZOMIERSKI, GEORGE P

ART UNIT

PAPER NUMBER

1793

MAIL DATE

DELIVERY MODE

04/11/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/528,372	<b>Applicant(s)</b> ASAI ET AL.	
	<b>Examiner</b> George P. Wyszomierski	<b>Art Unit</b> 1793	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on 23 January 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-9 and 18-30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 2,8,9,18-22 and 30 is/are allowed.
- 6) ☒ Claim(s) 1,3-7 and 23-29 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

1. The Amendment filed January 23, 2008 has been entered. Claims 1-9 and 18-30 are pending.

2. Claims 23, 24 and 26 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

a) In line 3 of claims 23 and 24, the term "the cooling process part" lacks proper antecedent basis.

b) In claim 26, line 2, the scope of the term "almost" uniformly is uncertain.

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 3-7, and 23-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Asai et al. (U.S. Patent 6,372,015) in view of Thompson (U.S. Patent 4,284,394).

Asai discloses a process that includes making nickel chloride by contacting chlorine gas with metallic nickel (in accordance with instant claim 7), reducing the nickel chloride by contacting it with a reducing gas, and cooling nickel powder generated from this process by contacting the powder with an inert cooling gas blown into its flow path.

Art Unit: 1793

With respect to instant claims 5 and 6, Asai column 4, lines 23-29 specifically discloses the presently claimed limitations regarding the cooling step. With respect to claim 25, the arrangement depicted in Figure 1 of Asai would appear to meet the presently claimed limitations.

Asai does not disclose generating a "vortex flow" as recited in claim 1, and does not specify the number of blowing parts or angle of blowing of the inert gas as recited in claims 3, 4, 23, 24 and 26-29. The Thompson patent indicates that it was known in the art, at the time of the invention, to cool metal particles by creating a vortex of inert cooling gases in the path of the particles. This vortex is created by blowing the cooling gas through a plurality of tubes set at different positions and angles to create a desired cooling flow pattern. Thompson column 6, lines 13-36 describes an arrangement of the cooling tubes that appears to be in accord with claims 26-28. While Thompson does not recite the numerical limitations of instant claims 3 and 4 or the specific inclination in the horizontal or vertical directions as in claims 23, 24 or 29, arrangements as presently claimed would fall within the purview of the methodology by which Thompson creates his vortex of cooling gas. With respect to claims 3 and 4, the recitation of numerical values in a claimed process, when the general conditions of that process are known in the prior art, does not result in a patentable process in the absence of criticality of the specific numerical parameters. With respect to claims 23, 24 and 29, the exact blowing direction would be selected in the prior art such that all areas in which cooling is to occur are covered, e.g. as depicted in Figure 5 of Thompson.

Thus, the combined disclosures of Asai et al. and Thompson would have rendered a process of making and cooling metallic powder as defined in the instant claims obvious to one of ordinary skill in the art.

5. In a response filed January 23, 2008, Applicant alleges that the claimed invention should be considered patentable over the prior art because Thompson is concerned with cooling of molten particles as opposed to powder particles as done by Asai or the present invention, and/or because the material being cooled by Thompson is moving generally in the horizontal direction as opposed to the vertical direction. Applicant's arguments have been carefully considered, but are not persuasive of patentability because the physical forces involved in cooling a material are the same regardless of whether the material being cooled is solid or liquid. With respect to the direction of movement, the Asai patent discloses a process in which the material moves in the same direction as in the present invention.

The examiner agrees that the prior art does not disclose or suggest a process in which one conducts two cooling processes using two vortex flows, the second one downstream from the first. Also, as indicated in the prior office action, the prior art does not disclose or suggest a process as claimed and which includes generating an inert gas flow in the downward direction. Thus, claims 2, 8, 9, 18-22, and 30 are allowable over the prior art of record.

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to George Wyszomierski whose telephone number is (571) 272-1252. The examiner can normally be reached on Monday thru Friday from 8:00 a.m. to 4:30 p.m. Eastern time.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King, can be reached on (571) 272-1244. All patent application related correspondence transmitted by facsimile must be directed to the central facsimile number, (571)-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/George Wyszomierski/  
Primary Examiner  
Art Unit 1793

GPW  
April 9, 2008